

**REMARKS/ARGUMENTS**

Claims 1-19 are pending. Claims 1-19 are rejected finally. Claims 1, 3 and 19 are amended, and no new claims have been added. No new matter has been entered in light of these amendments. Reconsideration of this application in light of the above amendments and following comments is courteously solicited.

Rejection under 35 U.S.C. §112, first paragraph

The Examiner asserts in this final Office action that claims 1-19 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

The Examiner asserts the claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants' claims 2 and 4-18 are dependent upon Applicants' amended independent claims 1 and 3.

Applicants have amended independent claims 1, 3 and 19 and replaced the claim language, "the electron flow through the quantum dot layer is blocked by the quantum dots formed in the quantum dot layer;", with the following claim language, "a photon absorption facilitates the current flow through the channel".

The amended claim language, "a photon absorption facilitates the current flow through the channel", may be found at page 21, lines 3-19 and, more particularly, page 21, lines 11-15 of Applicants' specification as originally filed. Applicants' specification explicitly supports the amended claim language of amended independent claim 1, 3 and 19.

By entry of these amendments, Applicants have removed the rejected language from independent claims 1, 3, and 19, and have inserted claim language supported by Applicants' specification.

In light of the foregoing amendments, Applicants respectfully request the Examiner withdraw the rejection under 35 U.S.C. §112, first paragraph, and find claims 1-19 allowable.

# CONCLUSION

As there is no prior art rejection, it is submitted that the instant application is now in condition for allowance and an early indication of same is respectfully requested.

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the Examiner is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

It is submitted that the claims as amended herein patentably define over the art relied on by the Examiner and early allowance of same is courteously solicited.

If any fees are required in connection with this case, it is respectfully requested that they be charged to Deposit Account No. 02-0184.

Respectfully submitted,  
Taehee Cho et al.

By



Ross J. Christie  
Attorney for Applicant  
Reg. No. 47,492  
Tel: (203) 777-6628 x.116  
Fax: (203) 865-0297

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I, Antionette Sullo, hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Mailstop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on December 22, 2006.

  
Antionette Sullo